

Tobacco and tuberculosis

KEY FACTS

- Active smoking is significantly associated with TB infection and disease.
- Exposure to secondhand smoke is significantly associated with TB disease, and with TB infection among children and young people.
- Up to one in five deaths from TB could be avoided if patients were not smokers.
- Smokers with TB need counselling and help with quitting.
- Cessation counselling can be set up without detailed or costly training.

Background

Tobacco is the leading preventable cause of death in the world today.¹ It currently leads to the death of one in ten adults. The number of annual deaths is expected to increase to 8 million by 2030.² Smoking causes a wide range of health conditions and fatal diseases, including cancer, respiratory disease and heart disease.³ It is the most important risk factor for chronic obstructive pulmonary disease and lung cancer.

Exposure to secondhand tobacco smoke harms health and worsens existing health problems, including respiratory conditions. It causes diseases such as lung cancer, coronary heart disease and cardiac death.³



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The association between smoking and tuberculosis (TB)

Smoking has been associated with tuberculosis since 1918. However it is only recently that the association has been given widespread attention.⁴ Developing tuberculosis disease involves two distinct transitions: (1) from being exposed to being infected; (2) from being infected to developing the disease.⁵ Recent studies have found links between smoking and many aspects of tuberculosis:^{6,7}

- Smoking and exposure to secondhand smoke are significantly associated with tuberculosis disease.
- Smoking is significantly associated with tuberculosis infection. The number of cigarettes smoked and the duration of smoking may also influence the risk of infection.
- Exposure to secondhand smoke is significantly associated with tuberculosis infection in children and young people.
- Smoking is associated with recurrent tuberculosis disease.
- Smoking is associated with tuberculosis mortality.

Studies have highlighted the need for more research on the relationship between tobacco and tuberculosis, including types of tobacco product, dose and duration of smoking, and exposure to secondhand smoke.^{6,7}

The importance of smoking cessation for tuberculosis patients

Up to one in every five deaths from tuberculosis could be avoided if the patients were not smokers.^{8,9,10} Smokers with tuberculosis need to receive counselling and help with quitting smoking. However, healthcare professionals working with tuberculosis patients have often not been made aware of or involved in the provision of smoking cessation services.⁴ This is because of a lack of awareness of the association between smoking and tuberculosis.

They should advise patients that quitting smoking and avoiding exposure to secondhand smoke are important in controlling tuberculosis. It is possible to set up cessation counselling without the need for detailed or costly training.⁵

Smoking cessation interventions

Creating the correct environment

Health professionals may not be willing to incorporate smoking cessation advice into their care of tuberculosis patients. They may feel it is not their responsibility or that they do not have the expertise. So it is important that they receive training and know that it is their job to provide cessation advice.

A supportive environment is also needed in addition to training. Those who manage the health service need to facilitate the adoption of the new procedure. They need to encourage health professionals to use it and patients to accept it. The role of 'stop-smoking coordinator' should be assigned to a staff member. They would understand and explain the correct completion of monitoring forms and patient records. Wider policy support, such as from health ministries, is also needed.¹¹

Recommendations for tuberculosis case management

When healthcare professionals are implementing DOTS (Direct Observed Treatment Shortcourse) the following process is recommended:⁶

- Record smoking status (and any exposure to secondhand smoke) when a patient is registered as a tuberculosis case.
- Warn patients that continued smoking will make their treatment less effective. Advise them to quit tobacco use and avoid exposure to secondhand smoke.
- Counsel patients on how to quit smoking when starting tuberculosis treatment. If they do not quit, tell them to avoid exposing others to their tobacco smoke.
- Include follow up and support for smoking cessation in patient monitoring.
- Warn cured patients that starting smoking again would pose a risk of re-infection and disease.

A healthcare professional's knowledge about a patient's smoking status or their exposure to secondhand smoke helps them to better manage the treatment of tuberculosis. The evidence on tobacco and tuberculosis should give them the confidence to advise patients to stop smoking, remain a non-smoker or avoid exposure to secondhand smoke.

Ways of providing brief advice

Brief advice to tuberculosis patients, repeated throughout their care, can improve cessation rates. If a patient does not quit smoking initially, they can be asked to reconsider this at a later visit. They can also be advised not to smoke in the presence of other people. Those who wish to quit can discuss issues such as nicotine replacement therapy and other available cessation medication. Repeating the brief advice reinforces the patient's attempts to quit or success in quitting.

The Union proposes a simple and brief format for cessation advice – a series of questions about why the patient smokes, whether they want to quit and, if so, how confident of success they are. If they do not quit, they are advised not to smoke in the presence of others. Three follow-up visits take place after this intervention. Another option for brief advice is using the USA national guidelines.¹²

Intensive treatment strategies

More intensive interventions for smoking cessation can be provided to smokers wishing to quit. Nicotine replacement therapy, or medication such as bupropion and varenicline, are widely documented.¹³ Cognitive behavioural treatment is less widely documented but is effective. It involves breaking all of the emotional and situational ties that the patient has established with the act of smoking. The health professional provides the smoker with techniques to break their dependence on smoking, and how to remain a non-smoker once they have quit.¹⁴

Monitoring smoking cessation intervention

The best way of ensuring that smoking cessation interventions are standardised and offered equally to all tuberculosis patients, is to record and monitor them.¹⁵ This allows the service to be evaluated and improved where necessary.



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¹ The World health report 2003: shaping the future. Geneva, World Health Organization, 2003. www.who.int/whr/2003/en/

² WHO report on the global tobacco epidemic, 2008. The MPOWER package. Geneva, World Health Organization, 2008. www.who.int/tobacco/mpower/en/index.html

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